

III. Claims

This version and listing of the claims replaces all prior versions and listings of the claims.

1. (currently amended) A bone mineral density evaluation system for evaluating a bone mineral density from an X-ray picture of a mandible, said X-ray picture containing a picture of an artificial reference specimen disposed beside a picture of said mandible, said X-ray picture resulting from x-raying said artificial reference specimen disposed in such a position that said picture of said artificial reference specimen is positioned beside said picture of said mandible in said X-ray picture, said system comprising:

detecting means for detecting a gradation of a particular portion of said picture of said artificial reference specimen;

correcting means for correcting the gradation of said X-ray picture so as to make the gradation of said particular portion of said picture of said artificial reference specimen as detected by said detecting means comply with a preset standard value ~~to which said gradation of said particular portion is referenced;~~ and

evaluating means for evaluating the bone mineral density on the basis of the corrected gradation of said X-ray picture as corrected by said correcting means;

wherein:

said evaluating means makes evaluation on the basis of the corrected gradation of a particular region of said mandible in said X-ray picture; and

said particular region includes a region corresponding to an alveolar bone portion around a first premolar.

2-5. (canceled)

6. (previously presented) The bone mineral density evaluation system according to Claim 1, further comprising setting means for setting said standard value.

7. (previously presented) The bone mineral density evaluation system according to Claim 1 wherein said standard value is set based on a result of detection by said detecting means of a particular X-ray picture.

8. (previously presented) The bone mineral density evaluation system according to Claim 1 wherein said evaluating means includes display means for displaying said corrected gradation in the form of histogram.

9. (previously presented) The bone mineral density evaluation system according to Claim 1 wherein said evaluating means includes judging means for judging said bone mineral density on the basis of said corrected gradation.

10. (currently amended) The bone mineral density evaluation system according to Claim 1, further comprising output means for providing together a plurality of evaluation results provided by said ~~evaluation~~ evaluating means for respective ones of a plurality of X-ray pictures.

11. (canceled)

12. (currently amended) A bone mineral density evaluation system for evaluating a bone mineral density from an X-ray picture of a mandible, said X-ray picture containing a picture of an artificial reference specimen disposed beside said mandible, said X-ray picture resulting from x-raying said artificial reference specimen disposed in such a position that said picture of said artificial reference specimen is positioned beside said picture of said mandible in said X-ray picture, a gradation of said picture of said artificial reference specimen varying from portion to portion, said system comprising:

detecting means for detecting an average and a deviation of the gradation of said picture of said artificial reference specimen;

correcting means for correcting the gradation of said X-ray picture so as to make the average and the deviation as detected by said detecting means comply with a preset standard average and a preset standard deviation ~~to which said detected average and said detected deviation are referenced, respectively;~~ and

evaluating means for evaluating the bone mineral density on the basis of the corrected gradation of said X-ray picture as corrected by said correcting means,

wherein said evaluating means makes evaluation on the basis of the corrected gradation of a particular region of said mandible in said X-ray picture,

wherein said particular region includes a region corresponding to an alveolar bone portion around a first premolar.

13. (currently amended) The bone mineral density evaluation system according to Claim 12, further comprising setting means for setting said standard ~~value~~ average and said standard deviation.

14. (previously presented) The bone mineral density evaluation system according to Claim 12 wherein said standard average and said standard deviation are set based on a result of detection by said detecting means of a particular X-ray picture.

15. (previously presented) The bone mineral density evaluation system according to Claim 12 wherein said evaluating means includes display means for displaying said corrected gradation in the form of histogram.

16. (previously presented) The bone mineral density evaluation system according to Claim 12 wherein said evaluating means includes judging means for judging said bone mineral density on the basis of said corrected gradation.

17. (currently amended) The bone mineral density evaluation system according to Claim 12, further comprising output means for providing together a plurality of evaluation

results provided by said ~~evaluation~~ evaluating means for respective ones of a plurality of X-ray pictures.

18. (new) The bone mineral density evaluation system according to claim 12, wherein said artificial reference specimen is an aluminum block.

19. (new) The bone mineral density evaluation system according to claim 18, wherein said aluminum block has a stepped structure.

20. (new) The bone mineral density evaluation system according to claim 12, wherein said artificial reference specimen has a stepped structure.

21. (new) The bone mineral density evaluation system according to claim 1, wherein said artificial reference specimen is an aluminum block.

22. (new) The bone mineral density evaluation system according to claim 21, wherein said aluminum block has a stepped structure.

23. (new) The bone mineral density evaluation system according to claim 1, wherein said artificial reference specimen has a stepped structure.